Palomar Adaptive Optics Test Plan

Title	Laser optimization at zenith
Date	4/2/2007 V1
Lead	j. roberts
Time requested	-
Required conditions	-

Purpose
Perform any optimizations on the laser that can be done at zenith

Test procedure
1. Go to LGS mode
2. Move lgs_x to lgs position (92000)
3. Lock HOWFS on LGS
   3.1. Acquire laser on HOWFS
   3.2. Start Chopper
       3.2.1. Using terminal window on PC
           3.2.1.1. Set to external reference
           3.2.1.2. Set to run
   3.3. Take a background
   3.4. Lock UTT and DM
4. UTT gains
   4.1. With loops locked, note UTT residuals at UTT gains of 0.2, 0.4, 0.8, 1.6, 3.2
   4.2. Set gain to "optimal" gain
5. Chopper
   5.1. Check chopper settings
       5.1.1. Startup aomonitor in idl to check average counts
       5.1.2. Startup connection to delay generator (see setup procedure)
       5.1.3. Detune laser
       5.1.4. Increase delay on chopper (channel 3) to see no Rayleigh. Decrease the delay on the chopper to find the limit where Rayleigh is just visible.
       5.1.5. Retune laser
       5.1.6. Increase the delay to see maximum signal. Decrease the delay to find the limit where signal starts to drop off.
       5.1.7. Select a delay time between the two limits

Results and conclusions